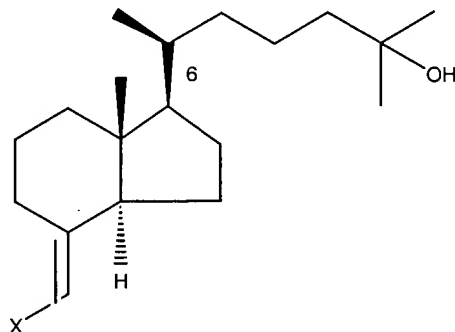
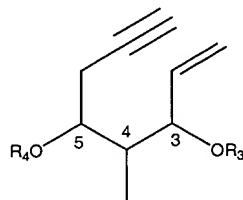


Claim 4 (Amended) A method for producing a vitamin D₃ compound described in claim 3, comprising reacting an exo-methylene compound of formula (II):



wherein X is a bromine atom or an iodine atom, with an eneyne compound of formula (III):



wherein R₃ and R₄ are each independently a hydrogen atom or a tri (C₁ to C₇ hydrocarbon) silyl group in the presence of a palladium catalyst, and optionally removing the protecting group of the tri (C₁ to C₇ hydrocarbon) silyl group, and further wherein the vitamin D₃ derivative is

- (i) (20S)-1 α , 25-dihydroxy-2 β -methyl-3 β -vitamin D₃;
- (ii) (20S)-1 β , 25-dihydroxy-2 β -methyl-3 α -vitamin D₃;
- (iii) (20S)-1 α , 25-dihydroxy-2 α -methyl-3 β -vitamin D₃;
- (iv) (20S)-1 α , 25-dihydroxy-2 α -methyl-3 α -vitamin D₃.